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THE Feed SITUATION

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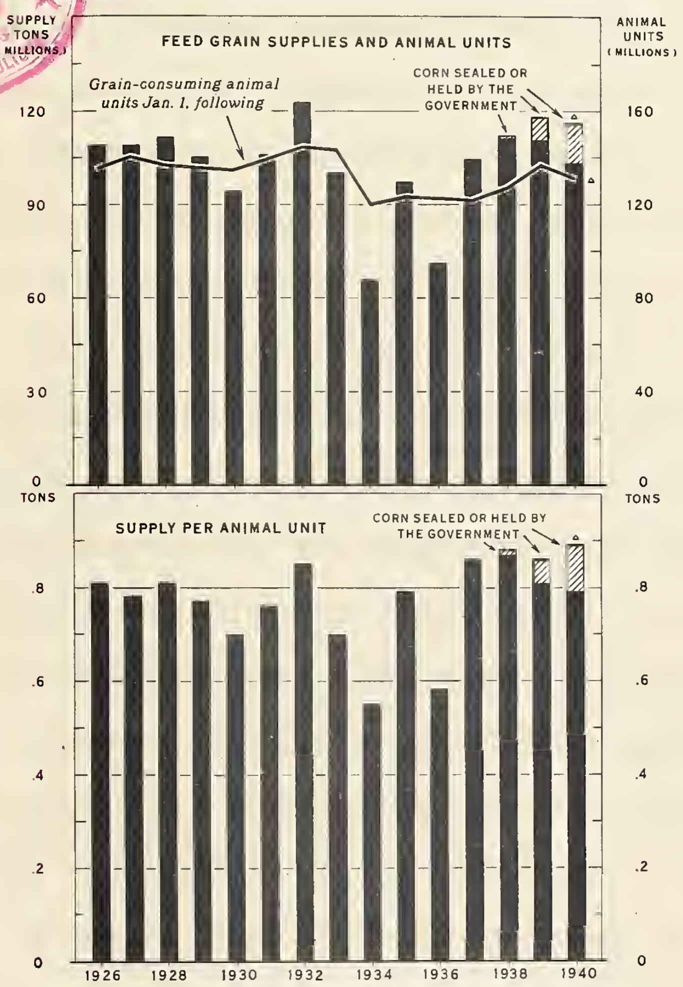
FEED GRAIN SUPPLIES* AND LIVESTOCK NUMBERS, 1926-40



*SUPPLY OF CORN OCTOBER 1, OATS JULY 1, AND BARLEY JUNE 1, PLUS PRODUCTION OF GRAIN SORGHUMS
ᐞ PRELIMINARY

U. S. DEPARTMENT OF AGRICULTURE NEG. 38513 BUREAU OF AGRICULTURAL ECONOMICS

GROWING CONDITIONS AND FEED GRAIN STOCKS ON JULY 1 INDICATE THAT 1940-41 SUPPLIES OF FEED GRAINS AND HAY WILL BE MORE THAN ADEQUATE FOR THE LIVESTOCK TO BE FED. ALLOWING FOR SOME DECREASE IN THE NUMBER OF GRAIN-CONSUMING ANIMALS, THE SUPPLY OF FEED GRAINS, INCLUDING SEALED CORN, PER GRAIN-CONSUMING ANIMAL MAY BE THE LARGEST ON RECORD. EXCLUDING SEALED CORN, THE SUPPLY PER ANIMAL MAY BE SOMEWHAT SMALLER THAN THE CORRESPONDING SUPPLY FOR EACH OF THE PAST 3 YEARS.

THE FEED SITUATION

Summary

Present indications are that the 1940-41 supply of feed grains and hay will be more than ample for the number of livestock to be fed. On the basis of an indicated corn carry-over about 75 million bushels larger than that of last year, and a 1940 production of feed grains about as was indicated on July 1, the total 1/ supply of the four feed grains for 1940-41 will amount to about 116 million tons. Since July 1, however, there has been a serious shortage of rainfall in the heart of the Corn Belt. Although the corn crop can still recover, the danger of loss from drought has been materially increased. A supply of 116 million tons would be a little smaller than last year's supply, but with the exception of last year it would be the largest supply since 1932-33. Since the number of grain-consuming animal units is expected to decline about 4 percent during 1940, the supply per animal unit may be a little larger than that of last year and the largest on record. However, if the quantity of corn that will probably be sealed on October 1 is excluded, the supply per animal will be somewhat smaller than the corresponding supply for any of the past 3 years.

The supply of hay as indicated July 1 is the largest since 1927. Total production is indicated to be 94 million tons, and the May 1 carry-over 11 million tons, making the supply 105 million tons.

Stocks of corn on July 1, including corn sealed, were the largest for that date on record, totaling about 975 million bushels compared with 881 million bushels last year. They were more than double the July 1 stocks during the period 1928-32. Of this amount, it was estimated that around 540

1/ Supply of corn October 1, oats July 1, barley June 1, plus grain sorghums production.

million bushels were sealed or held by the Government, leaving only 435 million bushels unsealed. This was about 200 million bushels less than the quantity of unsealed corn on July 1 last year, and about 30 million bushels less than the average for the 5-year period 1928-32. This comparatively small supply of unsealed corn, together with prospects for a smaller 1940 crop, appear to be the major factors supporting corn prices in recent weeks compared with a year earlier.

The July 1 indicated supply of oats for 1940-41 was 1,178 million bushels, or about 50 million bushels larger than last year. The 1940-41 supply of barley is indicated to be about 347 million bushels, or 12 million bushels larger than last year's supply. In mid-July oats and barley prices were higher than a year ago, but were much cheaper relative to corn than in mid-July 1939.

Livestock feeding ratios continue unfavorable to producers, although there was considerable improvement in the hog-corn price ratio and some improvement in the beef-corn price ratio from June to July as a result of advancing prices of these classes of livestock.

Indications are that there will be little corn exported during the next few weeks, except that exported through the Government export-aid program announced early in May. It is estimated that about half of the 25 million bushels of corn sold to Great Britain through this program has been exported. The remainder will be exported before October 1.

July 26, 1940

CORN

July 1 stocks of corn, including sealed corn, totaled 975 million bushels, or nearly 100 million bushels more than the stocks on that date last year and more than double the stocks during the period 1928-32. It was estimated that around 15 million bushels of corn had been unsealed by farmers or disposed of by the Government since April 1, leaving about 540 million bushels of corn sealed and 435 million bushels unsealed. The latter figure is about 30 million bushels less than the average for the years 1928-32, and nearly 200 million bushels less than the quantity of "free" corn available July 1 last year.

Table 1a.- Corn: Distribution of July 1 stocks

Position	Amount	
	Million bushels	
Stocks on farms:		862
1937 and 1938 corn	145	
1939 corn	290	
Sealed on farms	435	
Unsealed on farms	427	
Sealed by farmers in country elevators		11
Commercial stocks		25
Held by Government:		
Steel bins		61
Country elevators		15
Terminal elevators	1/ 15	
Subterminal elevators	1/ 2	
Grand total		2/ 975

1/ Included with commercial stocks.
2/ Total figure carried out to thousands.

While the supply of unsealed corn is much below average in some areas of the Corn Belt, for the Corn Belt as a whole the supply is above the 1928-32 average and adequate for the number of livestock on farms. In all the States east of the Mississippi River and in Minnesota, supplies, excluding corn sealed, are much above the 1928-32 average. In the other States west of the Mississippi River supplies of "free" corn are somewhat below average.

Table 1b.--Corn: Farm stocks July 1

State	1928-32	1939			1940			
		Total	1937 and 1938 corn: sealed	Unsealed corn	Total	1939 corn sealed	1937 and 1938 corn: resealed	Unsealed corn
	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.
Ohio	17	37	1	36	36	1	1	34
Ind.	24	47	6	41	51	6	2	43
Ill.	65	195	64	131	186	78	16	92
Mich.	3	11	---	11	9	1/	---	9
Wis.	2	10	---	10	8	1/	---	8
Minn.	9	53	18	35	82	37	10	35
Iowa	77	267	129	138	303	141	92	70
Mo.	20	35	7	28	34	5	4	25
S.Dak.	9	12	5	7	18	8	4	7
Nebr.	40	54	20	34	44	11	16	17
Kans.	23	12	5	7	6	1	3	2
Total	289	733	255	478	777	288	148	342

Disappearance of corn

The disappearance of corn during the period October-June 1939-40 amounted to 2,218 million bushels. Of this amount 34 million bushels were exported and 2,184 million bushels were used domestically. This compares with 30 million bushels exported and 2,014 million bushels used domestically during the corresponding period of 1938-39.

Table 2.- Corn: Supply and disappearance

Item	1928-32 average	1937-38	1938-39	1939-40
	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.
Supply, October 1	2,718	2,718	2,925	3,192
Stocks, July 1	465	667	881	975
October-June disappearance	2,253	2,051	2,044	2,217
Domestic	2,242	1,949	2,014	2,183
Net exports	11	102	30	34
Domestic disappearance per animal unit (bushels)	16.2	16.0	15.9	16.2
Carry-over, October 1	222	363	573	
July-September disappearance	243	304	308	
Domestic	242	268	304	
Net exports	1	36	4	
Grain-consuming animal units (millions), January 1	138	122	127	137
July-September domestic disappearance per animal unit (bushels)	1.8	2.2	2.4	

The marked increase in disappearance this year compared with last is apparently largely due to the increase in the number of grain-consuming animal units. Since a large part of our present corn supply is under seal and prices of oats and barley are cheap relative to corn, the feeding of corn may be reduced per animal, and the disappearance during July-September may not be much larger than that of the corresponding period last year. In this event, the carry-over of corn on October 1 might approximate 650 million bushels, which would be the largest carry-over on record and about 75 million bushels larger than the 1939 carry-over. A carry-over of this size, together with the indicated 1940 corn crop, would give a supply of corn of around 3,070 million bushels. The supply last year totaled 3,192 million bushels.

The marketing quota

Under the provisions of the Agricultural Adjustment Act of 1938, a marketing quota is to be proclaimed on corn, subject to approval by referendum of farmers, when the supply of corn exceeds the normal supply by more than 10 percent. The marketing quota level for 1940-41 has not yet been determined, but on the basis of last year's normal domestic consumption and exports, it will not be greatly different from July 1 indicated supply.

Prospects for the 1940 corn crop

The prospective 1940 corn crop was indicated on July 1 to be 2,416 million bushels, or about 200 million bushels smaller than the 1939 crop. Since July 1 there has been a serious shortage of rainfall in the heart of the Corn Belt. Daily reports from weather stations show that precipitation during the first 23 days of July in Ohio, Indiana, Illinois, Missouri, Iowa, Nebraska, South Dakota, Minnesota, and eastern Kansas was less than one-half of the normal for this period. Furthermore, all of these States have recently had some hot weather. It is difficult to appraise the effects of this weather so long as the crop can still recover, but obviously the danger of loss from drought has been materially increased in this area, which was expected to produce 60 percent of the crop this year.

The acreage of corn in 1940 has been reduced, largely as a result of the Agricultural Adjustment program. Corn acreage was cut 7 percent in Illinois, 5 percent in Indiana, 6 percent in Ohio, 9 percent in Iowa, and 7 percent in Missouri.

Corn hybrids

Information is not yet available on the acreage seeded to hybrid corn this year, but it is estimated that there were further slight gains in practically all the important producing States over the 1939 acreage. It was estimated last year that around three-fourths of the acreage in Iowa, two-thirds of the acreage in Illinois, and three-fifths of the acreage in Indiana was seeded to corn hybrids. Ohio, Minnesota, and Wisconsin, with somewhat less than one-half of their acreage in corn hybrids in 1939, made some further increases in 1940. In the other North Central States there will probably be some further expansion in the quantity of corn hybrids used, but the hybrid acreage in these States is still relatively small.

Corn prices

The price of No. 2 Yellow corn for the week ended July 13 was 65 cents per bushel at Chicago, or 17 cents per bushel higher than a year earlier. The price of corn is now relatively higher than the price of oats and barley, which is in contrast to the relatively low price of corn during most of the 1939-40 marketing year. The price of corn is expected to remain high relative to prices of these grains during the remainder of the summer months. Prospects for 1940 production will be the most important factor affecting corn prices during the next 2 months. Other important factors are the European situation and the fairly large quantity of corn held under seal.

The unusually high quality of corn produced in 1939 has resulted in a much smaller than average percentage of the corn crop grading No. 3 and below. Because of a lack of No. 3 Yellow corn, which is normally about the average or representative grade, it has been necessary to shift quotations to No. 2 Yellow corn. Prices of these two grades were running practically the same during the period February-May.

OTHER FEED GRAINS

The 1940 indicated acreages of oats and barley were both a little above the 1939 acreages, and production is also indicated to be somewhat greater than that of last year. The total supply of oats is now estimated at 1,178 million bushels. This is nearly 50 million bushels more than in 1939, but somewhat less than the large supplies of the 2 preceding years. It is also considerably less than supplies during the years just preceding 1933. The 1940-41 barley supply is now indicated to be 347 million bushels, the largest supply in recent years, exceeding last year's supply by about 12 million bushels. It is too early at this time to estimate grain sorghum production, but - with the larger acreage - if weather conditions are about normal, production in 1940 may be somewhat greater than in 1939.

Total feed supplies

The combined supplies of corn, oats, and barley, for the marketing years of these grains, as previously indicated, plus an about average grain sorghum crop would give a supply of feed of about 116 million tons. This compares with 118 million tons last year and 108 million tons for the 1928-32 average. If the probable quantity of corn that will be under seal next October 1 is excluded from this supply, the supply amounts to only about 103 million tons compared with 111 million tons (excluding sealed corn) in 1939. It is estimated that the number of grain-consuming units on farms may decline about 4 percent during the present calendar year. In this event, the total supply of feed grains per grain-consuming animal unit would be somewhat above that of a year ago. The supply of unsealed corn per animal, however, would be somewhat smaller than the corresponding supply for each of the past 3 years.

Oats and barley prices

After declining from April to June, there has been little change in oats and barley prices during the past month. Prices of both of these grains in the middle of July were about 10 cents lower than in April. The price of No. 3 oats at Chicago for the week ended July 20 was 33 cents per bushel, or 5 cents above the price last year, while the price of No. 3 barley at Minneapolis was 44 cents per bushel, or 5 cents above the price for the corresponding week last year.

LIVESTOCK FEEDING RATIOS

The hog-corn price ratio for the week ended July 13 was 9.5, the highest since last December. This more favorable feeding ratio was due to the substantial advance in hog prices during the past month. The beef-corn ratio also advanced during the past month, and in July it was slightly more favorable to cattle producers than the average at this time during the 5-year period 1928-32. The butterfat-feed and feed-egg price ratios are still unfavorable to the producers of these products, but weekly figures indicate that they were a little more favorable to feeders in mid-July than in mid-June.

Table 3.- Ratios between the prices of feed grains and prices of livestock and livestock products, by months, average 1928-32, annual 1937-40

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Av.
							Hog-corn ratio 1/						
Av.1928-29 to 1932-33	11.7	11.4	11.4	11.4	12.4	13.1	12.0	11.6	11.4	11.1	10.8	11.1	11.
1937-38	15.2	16.2	14.1	13.3	14.6	15.8	14.1	14.2	14.9	14.7	14.5	15.8	14.
1938-39	17.5	16.7	14.2	14.2	16.2	15.6	14.2	13.0	12.4	12.3	12.3	13.8	14.
1939-40	14.2	12.0	9.6	9.0	8.9	8.8	8.7	8.1	7.6	5/9.5			

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Av.
							Beef-corn ratio 2/						
Av. 1928-32	15.2	14.7	15.0	15.0	14.9	15.5	15.7	16.4	17.5	18.5	18.3	17.5	15.
1938	13.7	13.7	14.6	14.7	15.3	16.7	18.2	19.2	19.8	23.1	21.8	19.9	17.
1939	20.1	21.1	21.7	20.6	18.9	18.0	19.4	20.2	18.9	20.4	19.4	17.0	19.
1940	16.2	15.8	16.1	16.1	14.3	14.7	5/16.3						
							Butterfat-feed ratio 3/						
Av. 1928-32	31.2	29.1	29.4	28.1	26.4	25.4	26.2	29.7	32.4	37.6	38.1	38.8	30.
1938	35.3	32.1	31.7	28.7	27.0	26.6	27.5	30.5	30.1	33.0	34.2	34.6	30.
1939	30.7	30.7	27.7	25.8	24.2	24.4	26.2	28.0	24.9	30.2	31.2	29.4	27
1940	29.4	28.3	26.5	25.0	24.0	23.7	6/24.0						
							Feed-egg ratio 4/						
Av. 1928-32	4.63	6.00	6.94	7.32	7.55	7.31	6.75	6.03	5.05	4.12	3.33	3.32	6.2
1938	5.31	6.96	6.87	6.94	6.17	5.82	5.30	4.53	3.80	3.26	3.03	3.50	5.5
1939	5.22	5.86	6.04	6.50	7.02	7.05	6.11	5.43	5.61	4.68	4.24	5.57	6.
1940	6.49	5.93	7.84	8.31	8.48	8.45	6/8.10						

For the first four footnotes see Feed Statistics Supplement of February 28, 1940, 1/ page 42, 2/ page 43, 3/ page 44, and 4/ page 45. 5/ Week ended July 13. 6/ Estimated for week ended July 13.

HAY SUPPLIES

July 1 indications were that hay supplies would be ample for livestock to be fed in all sections of the Corn Belt. They are especially large in the eastern Corn Belt, where conditions have been unusually favorable and acreages were increased over those of 1939. Yields were expected to be above the 10-year (1929-38) average in practically all sections of the country, and are also above those of last year in the New England States and in most sections of the Corn Belt.

The 1940 production was indicated on July 1 to be about 94,163,000 tons, which would be the largest crop since 1927. This, together with the slightly above-average carry-over of 10,865,000 tons, gives a total supply of 105,028,000 tons. This supply is the largest since 1927, and would be more than adequate for the number of hay-consuming animal units to be fed during 1940-41, even after allowing for some increase in the number of this class of livestock.

BYPRODUCT FEEDS

Supplies

Ample supplies of byproduct feeds were also indicated by the July 1 crop report. In this report a flaxseed crop of 28.8 million bushels was indicated, which is more than 8 million bushels greater than the 1939 crop. This would be the largest crop since 1924. Much of the linseed cake and meal from domestic flaxseed is normally retained in this country for feeding, and much of the linseed cake and meal processed from imported flaxseed is exported. Since a large part of the flaxseed crushed in 1940-41 will be domestic flaxseed, and since exports will be reduced by the blockade, the supply of linseed cake and meal for 1940-41 probably will be considerably larger than in any of the other past few years.

The 1940 soybean crop may also be somewhat larger than the 1939 crop. While it is too early to estimate production, a 14-percent increase was indicated in the acreage to be harvested for all purposes, which suggests that the 1940 crop may be the largest on record. Large supplies of these two high protein feeds, together with about the usual supply of cottonseed cake and meal and other high protein feeds, may result in a record supply of high protein feeds. The 1939-40 supply of high protein feeds has been estimated to have been about 4 million tons. This compares with supplies ranging from 2 million to 2.6 million during the years 1926-34.

Supplies of wheat millfeeds depend largely upon the demand for wheat, both domestic and foreign, and in turn upon the quantity of wheat milled. Present indications are that the total quantity of wheat milled in the United States in 1940-41 may not be greatly different from the quantity milled in 1939-40. The total wheat millfeed production during 1939-40 is estimated to have been about 4,950,000 tons.

Prices

Prices of cottonseed, soybean, and linseed cakes and meals have declined substantially since last April. For the week ended July 16 the price of cottonseed cake and meal at Memphis was about $8 per ton lower than in mid-April, and the price of soybean cake and meal was about $9 per ton lower than in mid-April. The price of cottonseed cake and meal was $1.50 higher for the week ended July 16 than for the corresponding week last year, while the price of soybean cake was about $3 per ton lower.

EXPORT DEMAND

Since the harvesting of the large Argentine crop of about 419 million bushels this spring, there has been little export demand for United States corn. At the present time the price of corn at Chicago is about 30 cents per bushel above the price of corn in Buenos Aires. The extension of blockades to the Mediterranean has further curtailed European markets for American corn. Unless this situation changes within the next few weeks, very little corn will be exported from the United States, except through the export-aid program announced early in May. About one-half of the 25,300,000 bushels of corn sold through this program has already been exported. The remainder of this corn will be exported by October 1. The bulk of these exports are made up of 1937 and 1938 corn which was taken over by the Commodity Credit Corporation in payment of corn loans.

INDUSTRIAL USES FOR CORN

The demand for corn has been reduced over the past 40 years by a decline in the quantity of corn consumed per animal unit, a decline in the number of work stock on farms, and a decline in the quantity of corn exported. During the past 3 years corn production has exceeded domestic and export requirements by 100 to 300 million bushels annually. If corn production continues near the levels of the past 3 years, it will be necessary to increase livestock production, or find new industrial outlets for corn in order to avoid a further increase in corn stocks.

Table 4.- Corn: Annual utilization for specified purposes, 1900-1904 to date

5-year averages	Merchant mills 1/	Alcohol and liquor 2/	Wet-process grindings 3/	Breakfast foods 1/	Consumed by farm families 4/	Total, food and industry
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
1900-1904	132,050	27,450	26,450	2,314	33,135	221,399
1905-09	124,628	30,445	39,430	3,071	33,043	230,617
1910-14	107,726	32,940	49,148	4,014	33,091	226,919
1915-19	89,342	24,030	65,565	4,957	35,759	219,653
1920-24	58,255	5,066	65,029	5,897	33,644	167,891
1925-29	53,199	8,649	84,014	9,429	31,149	186,440
1930-34	42,945	11,687	65,316	7,470	33,265	160,683
1935-38 10/	37,443	33,923	72,455	7,195	33,049	184,065

5-year averages	Net exports 5/	Seed 6/	Total, food, industry, seed, and exports	Total disappearance 7/	Feed 8/	Grain-consuming animal units 7/	Fed per grain-consuming animal unit
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	Thousands	Bushels
1900-1904	81,537	17,005	319,941	2,477,096	2,157,155	112,609	19.2
1905-09	66,096	17,481	314,194	2,749,435	2,435,241	117,886	20.7
1910-14	37,821	17,910	282,650	2,619,567	2,336,917	122,074	19.1
1915-19	33,797	18,327	271,777	2,650,139	2,378,362	137,140	17.3
1920-24	74,549	18,085	260,525	2,776,668	2,516,143	140,715	17.9
1925-29	21,309	17,781	225,530	2,632,352	2,406,822	136,470	17.6
1930-34	9/-3,437	18,830	176,076	2,303,865	2,127,789	136,459	15.6
1935-38 10/	12,134	17,059	213,258	2,129,128	1,915,870	123,694	15.5

1/ Based on census data. 2/ Bureau of Internal Revenue. 3/ Corn Refiners' Statistical Bureau. 4/ Agricultural Marketing Service. 5/ Department of Commerce. 6/ Estimated from acreage seeded. 7/ Feed Statistics Supplement, Bureau of Agricultural Economics. 8/ Includes waste. 9/ Net imports. 10/ 4-year average.

In the discussion which follows, some of the present and possibly new industrial outlets for corn are considered in the light of their possibilities as new markets for corn. The accompanying table shows the principal uses of corn during the past 40 years.

Since a large part of the crop is consumed by livestock, about 90 percent in recent years, it would require a very large percentage change in the total quantity of corn used industrially to offset a small percentage change in the quantity fed to livestock. For example, if the total quantity of corn consumed by livestock were to decline 44 million bushels from the average of the past 5 years, it would be a reduction of only 2 percent. On the other hand, it would require an increase of 50 percent in the amount of corn processed by the wet-processing industries, or an increase of more than 100 percent in the quantity of corn used in the production of alcohol and distilled spirits, to offset this reduction.

Possibilities for Increasing Corn Utilization

Dry-processing industries

The quantity of corn used in the production of corn meal, corn flour, and hominy grits has been declining during the past 30 years. Prior to the World War from 175 to 200 million bushels of corn, (about 6 to 8 percent of the total corn production) were processed by these industries annually. In recent years it is estimated that the total quantity of corn processed by these industries has amounted to only 50 or 60 million bushels, or about 2 percent of the total domestic production. Much of the corn meal and hominy grits produced is consumed in the Southern States. Since both the quantity of corn meal consumed as food and the quantity fed to livestock have been declining in recent years, and a reversal of this trend would be totally dependent on changes in dietary and feeding habits, no significant increase in utilization can be expected here.

Wet-processing industries

In recent years the wet-processing industries have purchased about 70 million bushels of corn annually, of which about 40 percent has been used in producing sirup, about 35 percent has been used in producing starch, and about 25 percent has been used in producing corn sugar.

The quantity of starch produced for sale by these industries required the processing of around 20 to 25 million bushels of corn annually. This starch is used principally in making foods, textiles, dextrines, adhesives, paper, and for laundering. Corn starch competes directly with tapioca and arrowroot flour as well as potato starch, rice starch, and wheat starch.

In recent years a considerable quantity of tapioca, sago and arrowroot flour has been imported, which has probably limited to some extent the quantity of corn starch consumed domestically. These imports, however, are the equivalent of only 12 to 14 million bushels of corn.

Table 5.- Sugar: Quantities of cane, beet, and corn sugar used by specified industries in 1937, and average prices paid per pound

Item	Beet sugar	Cane sugar	Total	Equivalent in: bushels corn 1/	Corn sugar	Equivalent in: bushels corn 1/	Price per pound: Beet sugar	Price per pound: Cane sugar	Price per pound: Corn sugar
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 bushels	1,000 pounds	1,000 bushels	Cents	Cents	Cents
Beverages	12,617	302,501	315,118	11,671	84,387	2/ 2,281	2.1	2.0	2.6
Bakeries	278,820	749,449	1,028,269	38,084	102,371	3,792	2.0	2.0	2.4
Canneries	162,186	440,397	602,583	22,318	10,084	373	2.1	2.1	2.4
Confectionery and cocoa	230,136	753,643	983,779	36,436	20,592	763	2.1	2.1	2.6
Extracts	11,947	308,544	320,491	11,870	15,159	561	2.0	2.0	2.6
Other foods	50,029	271,965	321,994	11,926	13,409	497	2.0	2.1	2.4
Other industries	22,117	77,781	99,898	3,700	5,849	217	2.1	2.3	2.6
All industries.	767,852	2,904,280	3,672,132	136,005	251,851	8,484	2.1	2.1	2.5
Other uses	1,723,360	7,959,420	9,682,780	358,621	165,998	2/ 4,486			
Total quantities used	2,491,212	10,863,700	13,354,912	494,626	417,849	12,970			

1/ One bushel of corn equivalent to 27 pounds of sugar.

2/ One bushel of corn equivalent to 37 pounds of sugar used for these purposes.

In recent years about 12 to 15 million bushels of corn have been used annually in the production of corn sugar. Most of the corn sugar is consumed for industrial purposes, where it is used to supplement cane sugar or beet sugar. In 1937 about 250 million pounds of corn sugar were used by principal industrial concerns. This was equivalent to about 8 million bushels of corn. Quantities of corn, cane, and beet sugar used by certain industries are shown in the accompanying table.

A comparison of prices shows that all of these industries paid somewhat less for cane and beet sugar than for corn sugar. The average price paid by all industries for cane and beet sugar was 2.1 cents per pound; for corn sugar it was 2.5 cents per pound. This difference in price partly accounts for the smaller quantities of corn sugar used and suggests that a substantial expansion might occur if corn sugar prices were lowered. In some industries where a high sweetening value per pound is desired, it would probably be necessary for corn sugar to sell at a substantially lower price than cane or beet sugar before it would be substituted in volume. In other industries such as the canning, baking, and alcoholic beverage industries, corn sugar might be preferable at the same or slightly lower prices.

For the average of the industrial uses shown in the accompanying table it is estimated that 1 bushel of corn would produce on an average about 27 pounds of the sugar. Assuming that the cane and beet sugar could be displaced pound for pound by corn sugar, it would require 136 million bushels of corn to produce the quantity of sugar required by these concerns. The actual possibility for corn utilization in this field is somewhat less than this, since for some industries a fairly constant ratio of corn sugar to cane sugar is maintained, and any reasonable change in the relation between these prices would not cause a complete substitution of corn sugar for cane or beet sugar.

Alcohol and distilling industries

Following the repeal of prohibition, there was a marked increase in the quantity of corn used for making alcohol and distilled spirits. In 1936-37 the total quantity used amounted to 44 million bushels, the largest in over 20 years. Compared with the size of the crop, however, this was small, amounting to less than 2 percent of a normal year's production. There is little reason to expect that the quantity of corn used in making alcoholic beverages will be increased much above this level in the next few years.

A much larger quantity of corn, however, might be used in producing power alcohol if it could be produced from corn at a price low enough to compete with gasoline. At the present time the price of alcohol processed from corn is much higher than the price of gasoline. It is estimated that alcohol could be processed from 50-cent corn at a cost of about 28 cents per gallon, allowing 3 cents for the byproduct feed produced with each gallon of alcohol. Gasoline can be purchased wholesale, tax excluded, at Corn Belt markets at around 10 cents per gallon. These figures would indicate that the complete substitution of alcohol for gasoline can be considered only as a long-time possibility - after our petroleum supplies are largely exhausted.

The use of an alcohol-gasoline blend, however, may be nearer a reality, since blending alcohol and gasoline gives a motor fuel of somewhat higher octane rating than "regular" gasoline. The cost of such a fuel, on the basis of present corn prices, would be about 2 cents per gallon higher than "regular" gasoline.

This price difference is not far out of line with the present difference in the price paid for "high test" and "regular" gasoline at local midwest service stations. In 1936, 780 million gallons of ethyl, "high test" gasoline were sold in the United States. If this had been substituted by a 10-percent alcohol-gasoline blend, it would have required 78 million gallons of alcohol, or 31 million bushels of corn. The amount of "high test" gasolines sold has been increasing in recent years to keep pace with the increase in the compression ratios of American motor cars. The present rate of consumption of "high test" gasoline is probably considerably above the rate in 1936, but the quantity of corn used in its production still would be a very small percentage of our total corn supply. Furthermore, there is little assurance that large quantities of corn will be used in making an alcohol-gasoline blend, since new developments occur from time to time which change greatly the methods of processing fuels. A recent development has been the new synthesizing process which makes possible the production of gasoline of high octane rating without the addition of ethyl.

The technological advances yet to come cannot be forecast, but if in the future a considerable part of the gasoline now sold should eventuallybe processed from alcohol as a result of exhaustion of our present oil reserves, it would require a huge quantity of corn to produce this amount of motor fuel. In 1939 about 22 billion gallons of gasoline were sold in the United States. If one-tenth of this volume was made up of alcohol in a new alcohol-gasoline blend motor fuel, the quantity of corn required to produce this alcohol would approximate 890 million bushels, or more than one-third of a normal crop. The substitution of our entire gasoline supply with alcohol processed from corn would require about three times as much corn as is now produced annually.

M. CLOUGH

STATISTICS FOR COVER PAGE

Table 6.- Feed grain supply per animal unit, 1926-27 to 1940-41

Year	Corn	Oats	Barley	Grain sorghums	Total feed grain supply 1/	Supply excluding sealed corn 2/	Grain-consuming animal units	Supply per animal unit	
								Including sealed corn	Excluding sealed corn
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	Million	Tons	Tons
1926-27	79,099	22,707	4,249	3,028	109,083		135.5	.81	
1927-28	79,335	20,211	5,896	3,585	109,027		140.5	.78	
1928-29	77,216	22,849	8,133	3,377	111,575		137.0	.81	
1929-30	74,742	20,779	7,315	2,302	105,138		135.8	.77	
1930-31	62,069	22,866	7,647	1,752	94,334		134.9	.70	
1931-32	76,815	20,791	5,261	3,182	106,049		139.5	.76	
1932-33	89,645	22,462	7,385	3,073	122,565		144.5	.85	
1933-34	78,007	15,465	4,416	2,315	100,203		143.1	.70	
1934-35	50,350	10,774	3,671	1,126	65,921		120.3	.55	
1935-36	66,327	20,402	7,386	2,758	96,873		123.1	.79	
1936-37	47,226	17,023	5,368	1,542	71,159		122.8	.58	
1937-38	76,090	20,028	5,940	2,735	104,793		121.6	.86	
1938-39	81,908	20,341	6,956	2,776	111,981	111,201	127.3	.88	.87
1939-40	89,377	18,090	8,038	2,327	117,832	110,722	136.7	.86	.81
1940-41 3/	4/85,848	18,856	8,324	4/ 3,000	116,028	103,428	4/131.0	.89	.79

1/ Corn supply October 1, oats supply July 1, barley supply June 1, grain sorghums production.
2/ Sealed or held by the Government on October 1.
3/ Preliminary.
4/ Estimated.

Table 7.- Feed grains: Planted and harvested acreages in the United States, 1929-40

Year	Corn 1/		Oats		Barley		Grain sorghums 1/	
	Planted	Harvested	Planted	Harvested	Planted	Harvested	Planted	Harvested
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres
1929-33 average	105,754	104,544	40,581	39,296	13,398	12,035	7,485	7,148
1929	97,898	97,805	38,448	38,153	14,027	13,526	6,467	6,394
1930	101,813	101,465	40,110	39,850	12,829	12,595	6,877	6,589
1931	108,469	106,912	41,655	40,242	13,033	11,189	7,657	7,483
1932	112,061	110,577	42,517	41,703	13,707	13,178	8,498	7,966
1933	108,527	105.963	40,177	36,532	13,394	9,687	7,927	7,307
1934	99,806	92,554	38,091	29,455	11,376	6,553	9,009	6,830
1935	98.372	95,804	40,690	39,831	13,140	12,371	11,232	9,354
1936	100,999	93,020	39,117	33,370	12,121	8,372	9,153	6,878
1937	96,542	93,741	37,295	35,256	11,579	9,968	8,487	7,476
1938	93,689	92,222	36,911	35,661	11,345	10,513	8,495	7,680
1939	91,501	88,803	35,512	33,070	14,546	12,600	9,366	8,055
1940	88,116	86,306	35,871	34,585	14,779	13,290	2/10,309	

Compiled from reports of the Agricultural Marketing Service.

1/ For all purposes.

2/ Prospective plantings as of March 1.

Table 8.- Corn: Area seeded, area harvested, and production in Argentina, 1927-40, with exports during the following season

Year of harvest	Area seeded 1/	Area harvested	Production	Exports during following season 2/
	1,000 acres	1,000 acres	1,000 bushels	1,000 bushels
1927	10,599	9,060	320,848	289,834
1928	10,739	8,999	311,597	246,240
1929	11,831	9,026	252,408	209,532
1930	13,955	10,428	280,617	206,421
1931	13,776	11,577	419,661	387,759
1932	14,468	9,518	299,329	250,712
1933	14,539	9,373	267,761	209,378
1934	16,096	10,161	256,913	209,541
1935	17,368	14,091	451,943	311,882
1936	18,854	12,650	395,694	352,316
1937	15,051	10,776	340,147	270,027
1938	15,318	7,308	174,163	115,521
1939	13,096	8,653	191,485	133,441
1940	17,791	14,339	418,874	3/ 32,881

1/ During the fall of the preceding year.

2/ April - March.

3/ April 1 - July 22.

Table 9.- United States stocks of grain, by quarters, 1926-40

Year	Jan. 1			Apr. 1			July 1			Oct. 1		
	Farm	Commercial	Total	Farm	Commercial	Total	Farm	Commercial	Total	Farm	Commercial	Total
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
1926				966,505	[1]39,057	1,005,562	528,227	[1]32,279	560,506	259,006	[1]18,999	278,005
1927	1,463,041	36,019	1,499,060	872,286	49,759	922,045	445,443	36,268	481,711	192,369	24,913	217,282
1928	1,424,775	28,741	1,453,516	703,853	48,273	752,126	286,494	17,650	304,144	85,306	6,894	92,200
1929	1,419,901	18,565	1,438,466	772,164	37,744	809,908	390,875	13,740	404,615	143,919	4,421	148,340
1930	1,386,390	10,513	1,396,903	748,500	25,671	774,171	348,640	7,049	355,689	131,477	4,855	136,332
1931	1,133,655	17,190	1,150,845	633,537	22,167	655,704	315,702	8,175	323,877	162,185	5,586	167,771
1932	1,556,996	12,664	1,569,660	914,401	22,693	937,094	528,680	16,117	544,797	251,628	18,705	270,333
1933	1,858,461	30,633	1,889,094	1,156,102	36,151	1,192,253	646,176	48,618	694,794	326,530	59,791	386,321
1934	1,478,849	70,540	1,549,389	866,905	66,314	933,219	488,743	38,312	527,055	273,287	63,803	337,090
1935	836,482	43,752	880,234	447,009	21,352	468,361	207,770	7,491	215,261	61,655	3,421	65,076
1936	1,410,901	7,657	1,418,558	816,058	7,561	823,619	394,794	7,023	401,817	175,222	4,325	179,547
1937	806,935	14,440	821,375	409,074	11,323	420,397	155,115	6,264	161,379	60,571	5,651	66,222
1938	1,673,221	36,164	1,709,385	1,071,120	43,227	1,114,347	642,922	23,674	666,596	353,194	9,899	363,093
1939	1,819,710	52,644	1,872,354	1,220,603	43,745	1,264,348	849,765	30,880	[2]880,645	546,052	14,830	[2]572,882
1940	1,930,814	45,851	[2]2,066,203	1,285,505	39,704	[2]1,414,830	862,474	25,419	974,893			
						Oats						
1926				517,010	[1]54,237	571,247	227,537	[1]38,768	266,305	879,768	[1]50,194	929,962
1927	686,942	47,123	734,065	402,755	38,481	441,236	152,279	17,686	169,965	830,733	26,513	857,246
1928	627,911	23,815	651,726	332,782	16,803	349,585	111,827	3,338	115,165	1,016,785	17,561	1,034,346
1929	763,257	17,314	780,571	446,041	14,003	460,044	177,048	8,592	185,640	850,465	28,597	879,062
1930	640,940	29,019	669,959	367,081	19,484	386,565	143,385	11,028	154,413	978,873	32,928	1,011,801
1931	744,822	30,896	775,718	428,903	18,213	447,116	168,039	7,525	175,564	885,119	17,372	902,491
1932	653,889	16,810	670,699	364,754	15,796	380,550	142,280	10,657	152,937	977,762	28,895	1,006,657
1933	765,502	26,443	791,945	469,398	24,195	493,593	204,977	28,430	233,407	610,317	50,846	661,163
1934	457,637	47,229	504,866	276,539	38,190	314,729	107,691	23,369	131,060	454,726	26,271	480,997
1935	350,204	23,384	373,588	208,928	15,656	224,584	71,354	8,838	80,192	971,463	41,215	1,012,678
1936	770,398	42,863	813,261	493,787	38,205	531,992	246,952	31,463	278,415	679,957	50,973	730,930
1937	482,158	36,372	518,530	286,301	18,378	304,679	88,156	1,982	90,138	916,647	28,593	945,240
1938	698,431	25,827	724,258	421,840	21,141	442,981	196,065	6,825	202,890	854,323	22,026	876,349
1939	695,695	16,919	712,614	414,866	12,601	427,467	187,713	5,695	193,408	765,227	16,091	781,318
1940	594,684	12,054	606,738	346,160	7,539	353,699	143,741	3,130	146,871			

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[1] Bradstreet's visible.

[2] Includes corn held by the Government at country points.

Table 10.- Oats: Supply and distribution in the United States, 1926-40

Year beginning July 1	Carry-over, July 1: Farm	Carry-over, July 1: Market	Carry-over, July 1: Total	Production	Total supply	Net exports 1/	Domestic disappearance
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
1926	227,537	2/38,768	266,305	1,152,911	1,419,216	14,988	1,234,263
1927	152,279	17,686	169,965	1,093,221	1,263,186	9,611	1,138,410
1928	111,827	3,338	115,165	1,312,914	1,428,079	15,825	1,226,614
1929	177,048	8,592	185,640	1,113,050	1,298,690	7,680	1,136,597
1930	143,385	11,028	154,413	1,274,698	1,429,111	2,464	1,251,083
1931	168,039	7,525	175,564	1,123,892	1,299,456	4,352	1,142,167
1932	142,280	10,657	152,937	1,250,955	1,403,892	5,333	1,165,152
1933	204,977	28,430	233,407	733,166	966,573	1,251	834,262
1934	107,691	23,369	131,060	542,306	673,366	3/-14,498	607,672
1935	71,354	8,838	80,192	1,194,902	1,275,094	1,320	995,359
1936	246,952	31,463	278,415	785,506	1,063,921	744	973,039
1937	88,156	1,982	90,138	1,161,612	1,251,750	12,308	1,036,552
1938	196,065	6,825	202,890	1,068,431	1,271,321	4,087	1,073,826
1939	187,713	5,695	193,408	937,215	1,130,623	4/-8,500	992,252
1940	143,741	3,130	146,871	5/1,031,622	1,178,493		

1/ Oats, including oatmeal. 2/ Bradstreet's visible. 3/ Net imports.
4/ Partly estimated. Net imports. 5/ Production as indicated on July 1.

Table 11.- All hay: Stocks on farms May 1, production, and total supply, 1920-40

Year beginning May 1	Total stocks all hay May 1	Production: Tame hay	Production: Wild hay	Total supply
	1,000 tons	1,000 tons	1,000 tons	1,000 tons
1920	9,310	76,164	15,504	100,978
1921	16,361	71,035	13,786	101,182
1922	9,535	80,790	14,362	104,687
1923	11,366	75,286	14,132	100,784
1924	10,701	78,934	12,520	102,155
1925	12,725	67,334	11,498	91,557
1926	9,200	67,142	8,883	85,225
1927	8,489	83,341	14,810	106,640
1928	14,158	72,196	11,646	98,000
1929	8,673	76,105	11,175	95,953
1930	9,399	64,040	10,694	84,133
1931	7,725	66,561	8,162	84,448
1932	8,643	71,827	11,920	92,390
1933	10,927	66,530	8,412	85,869
1934	7,594	55,270	4,729	67,593
1935	4,934	78,138	11,388	94,460
1936	13,724	63,536	6,850	84,110
1937	6,047	73,449	9,168	88,664
1938	12,653	81,048	10,483	104,184
1939	16,377	75,726	8,800	100,903
1940	10,865	1/ 85,301	1/ 8,862	105,028

1/ Production as indicated on July 1.

Table 12.- Pasture: Condition in the North Central States and the United States for specified months 1/ and years

Year and month	Ohio	Ind.	Ill.	Mich.	Wis.	Minn.	Iowa	Mo.	N. Dak.	S. Dak.	Nebr.	Kans.	U. S.
1923-32 av.													
June	79.3	80.4	79.3	81.4	79.9	76.9	80.0	79.0	72.7	75.7	84.5	83.9	81.3
July	78.5	80.5	80.2	81.4	82.4	80.1	84.1	83.0	77.2	77.4	87.6	85.4	81.6
Aug.	76.0	73.4	72.3	69.5	74.2	70.3	74.4	73.3	69.3	66.5	75.5	77.0	74.4
1933													
June	89	88	88	90	86	80	86	88	77	84	83	77	81.5
July	66	55	62	73	72	58	57	56	52	27	45	41	60.5
Aug.	50	44	49	52	58	45	57	48	40	29	61	41	55.6
1934													
June	51	50	43	58	42	26	28	48	15	8	33	52	53.2
July	48	46	33	42	42	38	25	33	33	27	41	42	48.9
Aug.	41	38	36	26	48	36	39	12	20	19	23	15	39.6
1935													
June	78	87	83	79	85	80	82	87	56	70	71	49	77.7
July	85	92	92	89	95	92	95	92	76	82	90	73	85.4
Aug.	86	88	90	84	92	85	92	88	79	70	81	53	81.1
1936													
June	80	78	79	81	88	88	85	72	52	62	77	75	74.5
July	53	48	56	63	72	67	73	40	29	33	57	55	58.1
Aug.	39	23	26	35	23	29	23	14	13	12	22	22	41.6
1937													
June	85	87	84	87	83	86	89	85	52	61	57	51	75.7
July	92	91	90	90	89	93	93	84	69	69	57	49	79.4
Aug.	89	84	87	81	65	76	80	82	63	52	44	49	73.9
1938													
June	87	89	89	87	89	88	93	87	76	80	75	72	84.7
July	93	94	94	89	87	91	93	88	72	75	77	74	85.7
Aug.	88	93	91	81	89	87	87	78	73	62	71	72	83.3
1939													
June	71	76	85	82	76	70	68	85	54	48	64	67	72.8
July	84	88	91	83	88	85	82	91	74	60	69	72	77.9
Aug.	84	87	87	66	64	73	76	80	60	55	47	55	68.8
1940													
June	84	89	85	88	83	79	84	80	85	76	61	76	80.7
July	96	94	86	96	93	80	82	82	76	73	59	70	82.7

1/ On the first of each month.

Table 13.- Corn: Monthly farm price per bushel in the United States, 1930-40

Yr. beginning Oct.	Oct. 15	Nov. 15	Dec. 15	Jan. 15	Feb. 15	Mar. 15	Apr. 15	May 15	June 15	July 15	Aug. 15	Sept. 15	Weighted av. 1/
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cent
1930	81.9	66.3	64.9	61.7	58.6	57.5	57.7	56.3	53.8	54.0	50.8	43.2	59.6
1931	33.4	36.6	34.5	33.7	32.4	32.2	31.4	30.1	29.4	29.9	30.2	28.0	32.0
1932	21.6	19.4	18.8	19.1	19.4	20.6	28.2	38.9	40.2	55.4	48.8	46.5	31.9
1933	38.8	40.6	42.0	43.9	45.6	47.1	47.1	48.6	56.0	59.2	72.7	77.4	52.2
1934	76.7	75.7	85.3	85.3	84.5	82.7	85.2	84.8	83.3	82.4	80.8	78.0	81.5
1935	71.8	56.4	53.0	53.5	55.5	56.4	57.2	60.0	61.3	80.2	103.7	104.7	65.5
1936	97.9	94.6	95.6	100.6	103.6	105.4	119.1	121.2	117.2	118.1	102.6	93.9	104.5
1937	58.9	48.0	48.5	52.2	51.7	51.3	52.7	52.7	52.3	53.7	48.5	48.0	48.6
1938	41.9	40.0	43.1	45.1	43.9	44.4	45.4	48.3	49.9	47.8	45.7	56.2	48.7
1939	47.6	46.8	50.3	53.2	54.7	56.0	58.6	63.4	63.5				2/54.1

Compiled from reports of the Agricultural Marketing Service.

1/ Crop year averages by States, weighted by production, to obtain weighted averages for the United States. Corn sealed is included as sales for years 1937, 1938, and 1939. 2/ Preliminary.

Table 14.- Oats and barley: Monthly farm price per bushel in the United States, 1930-40

Yr. beginning July	July 15	Aug. 15	Sept. 15	Oct. 15	Nov. 15	Dec. 15	Jan. 15	Feb. 15	Mar. 15	Apr. 15	May 15	June 15	Weighed av. 1/
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
							OATS						
1930	33.1	35.7	36.1	34.7	31.5	32.3	31.1	30.7	30.1	30.2	28.6	26.1	32.2
1931	23.3	19.8	20.0	20.1	23.2	23.0	22.7	22.8	22.8	22.8	21.8	19.8	21.3
1932	17.5	14.8	14.4	13.1	13.1	13.0	13.4	13.3	13.7	17.0	21.7	23.1	15.7
1933	39.1	32.2	32.3	27.9	31.4	31.4	32.5	34.1	33.9	32.6	32.7	38.9	33.5
1934	40.6	45.8	50.3	50.5	51.1	53.9	54.6	54.7	54.1	53.5	49.8	41.9	48.0
1935	32.2	26.9	25.8	27.0	25.8	25.5	25.9	26.6	26.7	25.4	25.1	24.3	26.3
1936	35.2	43.0	43.5	43.1	44.2	48.4	52.7	53.7	52.5	54.6	53.5	48.1	44.9
1937	42.5	28.5	29.0	28.8	28.7	29.1	30.0	30.0	29.4	28.3	27.5	25.3	29.1
1938	24.0	20.3	21.8	22.1	22.5	24.4	26.3	26.2	26.9	27.4	29.5	29.9	23.2
1939	26.5	25.4	31.5	30.3	32.1	34.7	36.3	37.7	38.6	38.8	36.6	32.7	2/30.3
							BARLEY						
1930	40.0	43.6	45.3	41.9	38.3	38.8	36.6	35.3	34.4	35.2	35.5	32.6	40.5
1931	30.0	28.9	30.9	31.6	35.5	35.7	35.7	35.8	37.2	37.1	33.7	28.7	32.8
1932	24.6	21.1	20.1	18.2	20.1	19.3	18.4	17.9	18.3	23.4	29.9	28.3	22.1
1933	47.6	40.2	42.8	40.7	41.6	40.6	43.7	44.7	43.7	42.5	42.2	50.9	43.5
1934	52.6	63.5	78.2	75.5	75.9	79.7	80.2	79.2	76.0	74.4	66.0	55.0	68.6
1935	41.2	35.1	37.3	39.4	37.8	37.5	38.6	39.6	39.7	38.6	37.1	37.0	37[illegible]
1936	56.1	81.3	82.6	84.2	82.7	86.1	90.4	93.4	89.9	90.0	86.1	71.4	78.
1937	64.4	52.2	52.8	52.0	50.7	50.8	54.0	54.8	52.9	50.4	49.0	42.9	54.7
1938	38.9	34.5	35.3	36.1	34.7	36.5	38.0	37.6	38.0	37.9	39.2	39.4	37.7
1939	35.5	34.5	42.8	42.2	42.2	43.8	45.9	46.1	46.1	46.2	45.3	40.8	2/39.8

Compiled from reports of the Agricultural Marketing Service.

1/ Crop year averages by States, weighted by production, to obtain weighted averages for the United States. Corn sealed is included as sales for years 1937, 1938, and 1939. 2/ Preliminary.

Table 15.- Feed grains: Monthly average price per bushel at specified markets

Month	Chicago, No. 3 Yellow corn 1/				Buenos Aires, Yellow La Plata corn 2/			
	1936-37	1937-38	1938-39	1939-40	1936-37	1937-38	1938-39	1939-40
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Oct.	106.6	66.1	44.7	48.3	49.2	60.3	50.8	53.8
Nov.	104.7	53.4	46.0	49.7	45.4	64.9	49.0	54.5
Dec.	107.2	56.1	51.0	56.3	48.5	73.7	59.2	53.1
Jan.	112.2	59.3	51.5	58.5	50.4	84.3	59.5	47.4
Feb.	111.2	56.9	48.1	57.6	54.7	78.7	53.8	39.2
Mar.	116.0	57.9	47.5	57.9	56.1	68.8	54.7	35.6
Apr.	135.0	58.6	48.7	62.5	55.0	68.7	50.2	35.2
May	134.9	57.7	51.2	68.6	55.5	67.5	48.4	32.5
June	122.4	57.0	51.2	65.8	52.6	62.3	50.0	31.4
July	118.4	58.7	48.0		55.5	64.3	46.9	
Aug.	104.5	53.6	45.0		54.8	55.8	46.6	
Sept.	105.9	52.7	54.0		55.7	51.9	51.9	
Average 3/.	121.0	57.2	48.4		4/ 52.8	4/ 66.8	4/ 51.8	
	Chicago, No. 3 White oats 1/				Minneapolis, No. 3 barley 5/			
July	37.2	39.3	25.6	28.7	85.2	70.7	46.7	40.8
Aug.	44.3	30.3	24.0	29.6	114.5	61.1	46.1	41.5
Sept.	43.6	32.2	26.6	35.9	124.1	67.8	51.1	50.4
Oct.	42.1	31.8	25.4	34.5	122.4	69.3	47.5	50.1
Nov.	46.0	31.8	26.3	38.6	116.5	68.5	46.9	48.9
Dec.	50.4	32.4	29.3	40.8	120.9	71.5	49.2	52.0
Jan.	53.6	33.5	30.7	42.4	124.7	76.9	51.2	55.1
Feb.	51.5	32.8	30.4	42.9	124.2	78.4	49.0	54.1
Mar.	51.2	32.2	30.8	43.0	110.4	72.2	48.6	53.0
Apr.	54.4	31.2	32.2	43.1	114.6	69.4	47.7	55.7
May	52.2	29.3	34.0	40.6	103.0	66.2	50.4	54.7
June	48.0	28.4	34.0	35.1	76.7	54.2	48.8	46.3
Average 3/.	42.8	32.0	28.1	35.9	112.2	69.4	48.5	48.8

1/ Compiled from Chicago Daily Trade Bulletin. 2/ Near futures compiled from New York Journal of Commerce. 3/ Weighted. 4/ Simple average. 5/ Compiled from Minneapolis Daily Market Record.

Table 16.- Feed grains: Weekly average price per bushel at specified markets

Week ended	Corn						Oats		Barley		Wheat	
	Chicago				Buenos Aires		Chicago		Minneapolis		Kansas City	
	No. 3 Yellow 1/		Futures 1/		Futures 2/		No. 3 White 1/		No. 3 5/		Sample Grade Dk.Hd.Winter 6/	
	1939	1940	1939	1940	1939	1940	1939	1940	1939	1940	1939	1940
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
			July	July	May	May						
Apr. 27	50	67	50	65	49	35	33	43	48	57	73	100
May 4	51	68	51	66	49	34	33	42	50	55	79	103
11	52	69	52	67	49	34	35	42	49	57	78	104
					July	July						
18	52	67	51	62	48	33	33	39	50	56	72	---
25	52	--	51	63	49	32	35	39	52	53	76	77
June 1	52	67	51	62	49	32	35	38	51	51	81	75
8	52	66	51	63	50	32	35	35	50	48	--	77
15	51	66	50	62	51	32	35	35	49	46	73	---
22	51	7/65	49	62	50	32	33	35	47	44	70	---
29	49	7/66	47	61	50	32	32	34	48	44	72	73
July 6	49	7/65	47	61	50	33	31	34	45	45	68	66
13	48	7/65	45	61	48	33	30	34	39	46	64	69
20	42	7/65	9/43	9/59	8/44	8/34	28	33	37	44	64	66

See footnotes 1-5 above. 6/ Compiled from Kansas City Grain Market Review. 7/ No. 2 Yellow. 8/ August futures. 9/ September futures.

Table 17.- Byproduct feeds: Monthly average price per ton, bagged, at specified markets

Month	Standard bran, Minneapolis					Month	Standard middlings, Minneapolis				
	1935-36	1936-37	1937-38	1938-39	1939-40		1935-36	1936-37	1937-38	1938-39	1939-40
	Dol.	Dol.	Dol.	Dol.	Dol.		Dol.	Dol.	Dol.	Dol.	Do
July	17.60	25.75	25.25	15.00	14.70	July	19.80	27.40	31.75	18.05	17.
Aug.	16.25	26.00	18.45	13.40	14.55	Aug.	18.00	30.90	19.65	14.15	15.2
Sept.	15.00	23.60	18.15	13.60	20.90	Sept.	17.25	27.50	19.75	14.80	21.9
Oct.	15.50	25.75	19.00	13.20	18.80	Oct.	16.70	28.05	20.50	14.60	18.7
Nov.	15.50	30.40	19.60	15.20	21.00	Nov.	15.45	34.25	19.50	15.20	21.3
Dec.	16.05	32.20	19.30	16.60	20.50	Dec.	16.40	33.20	19.60	17.10	20.8
Jan.	15.65	33.75	21.90	18.10	21.20	Jan.	15.50	34.10	21.70	17.95	21.1
Feb.	15.45	31.30	20.50	18.00	21.90	Feb.	15.50	32.70	20.45	18.00	21.2
Mar.	15.70	33.45	20.35	19.95	22.60	Mar.	15.80	35.35	20.05	20.40	21.7
Apr.	17.55	36.45	18.25	21.95	24.35	Apr.	17.55	37.90	18.00	22.45	24.4
May	14.90	32.10	17.85	19.40	21.55	May	17.80	36.50	18.55	21.95	21.4
June	17.00	24.90	16.10	16.10	17.40	June	22.20	32.50	19.75	21.30	21.1
Av.	16.01	29.64	19.56	16.71	19.95	Av.	17.33	32.53	20.77	18.00	20.5

	Cottonseed meal 1/, Memphis						Soybean meal 1/, Chicago				
	1935-36	1936-37	1937-38	1938-39	1939-40		1935-36	1936-37	1937-38	1938-39	1939-40
	Dol.	Dol.	Dol.	Dol.	Dol.		Dol.	Dol.	Dol.	Dol.	Dol.
Aug.	21.50	33.95	26.10	22.05	21.15	Oct.	25.60	36.90	28.80	24.60	28.3
Sept.	20.30	30.95	21.30	21.00	26.05	Nov.	24.40	39.15	29.50	24.40	32.7
Oct.	23.15	29.90	21.95	20.90	25.25	Dec.	25.50	43.00	28.80	26.20	34.9
Nov.	22.25	32.25	23.00	21.75	28.25	Jan.	25.15	44.10	30.00	26.30	33.9
Dec.	22.20	34.20	22.05	22.40	29.50	Feb.	23.90	41.50	29.60	24.70	29.
Jan.	21.20	34.65	23.25	22.65	30.10	Mar.	22.30	41.10	28.10	24.45	30.4
Feb.	20.60	34.30	22.30	21.50	29.80	Apr.	23.30	47.60	26.00	24.70	29.65
Mar.	20.10	35.30	21.90	22.20	30.25	May	24.80	48.35	26.30	26.30	28.65
Apr.	21.40	40.15	21.40	23.20	30.80	June	26.10	39.20	25.30	25.95	24.4
May	21.55	40.30	20.80	23.65	29.40	July	38.90	37.30	26.95	24.70	
June	22.50	34.55	21.25	23.05	24.90	Aug.	44.30	34.90	26.15	25.70	
July	32.10	31.55	23.25	21.55		Sept.	39.70	34.20	27.00	33.70	
Av.	22.40	34.34	22.38	22.16		Av.	28.66	40.61	27.71	25.98	

1/ 41 percent protein. Compiled from reports of the Agricultural Marketing Service.

Table 18.- Byproduct feeds: Average price per ton, bagged, at specified markets

Date	Minneapolis				Memphis		Chicago	
	Standard bran		Standard middlings		Cottonseed meal 1/		Soybean meal 1/	
	1939	1940	1939	1940	1939	1940	1939	1940
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dolla
Apr. 9	21.25	24.75	22.25	25.00	23.00	30.50	24.70	29.2
16	22.50	24.50	23.25	24.50	23.50	30.75	25.20	29.2
23	24.00	24.50	24.00	24.75	23.75	31.00	25.20	30.2
30	23.00	24.00	23.25	24.25	24.25	31.25	25.70	30.4
May 7	20.00	23.75	22.50	23.75	24.00	30.50	26.20	29.7
14	18.50	22.50	21.00	23.00	23.50	30.00	26.70	29
21	18.50	20.75	21.50	22.75	23.25	29.00	26.70	27
28	17.00	19.00	21.50	22.00	23.25	28.00	26.20	27.5
June 4	15.50	17.50	19.75	20.00	23.25	26.50	26.20	26.10
11	16.00	17.00	21.50	20.00	23.25	25.25	25.70	24.70
18	16.75	18.00	22.50	22.00	23.00	24.50	26.20	23.70
25	16.25	17.00	21.50	22.00	22.75	23.50	25.70	23.20
July 2	15.50	16.00	19.50	21.50	22.00	23.00	25.20	21.5
9	15.00	16.25	18.25	21.00	21.75	23.50	25.20	21.70
16	14.75	16.00	18.00	21.50	21.50	23.00	24.20	21.20

1/ 41 percent protein. Compiled from reports of the Agricultural Marketing Service.

Table 19.- Feed grains: Acreage 1/ and production 2/ in specified countries, 1925-29 and 1938-40

Crop and country	Average 1925-29	1938	1939	1940	Percentage 1940 is of 1939
	Thousands	Thousands	Thousands	Thousands	Percent
CORN					
United States					
Acreage	99,456	92,222	88,803	86,306	97.2
Production	2,629,601	2,562,197	2,619,137	2,415,998	92.2
Canada					
Acreage	174	180	183	3/ 174	95.1
Rumania					
Acreage	10,606	12,349	12,187	12,819	105.2
Yugoslavia					
Production	120,277	187,229	159,269	151,566	95.2
OATS					
United States					
Acreage	41,145	35,661	33,070	34,585	104.6
Production	1,215,473	1,068,431	937,215	1,031,622	110.1
Canada					
Acreage	12,831	13,010	12,790	3/ 12,880	100.7
Greece					
Acreage	262	338	373	382	102.4
Hungary					
Acreage	687	554	633	793	125.3
Production	25,734	21,382	25,209	29,211	115.9
Rumania					
Acreage	2,806	1,609	1,455	1,588	109.1
Production	70,368	31,903	33,548	31,002	92.4
Yugoslavia					
Production	23,586	22,496	23,993	17,912	74.7
BARLEY					
United States					
Acreage	10,366	10,513	12,600	13,290	105.5
Production	241,168	253,005	276,298	287,377	104.0
Canada					
Acreage	4,297	4,454	4,347	3/ 4,484	103.2
Greece					
Acreage	453	483	532	493	92.7
Hungary					
Acreage	1,054	1,121	1,321	1,300	98.4
Production	27,329	33,252	36,264	33,069	91.2
Rumania					
Acreage	4,360	3,158	2,708	2,795	103.2
Production	75,485	38,222	37,498	51,119	136.3
Egypt					
Acreage	368	274	273	272	99.6
Japan					
Acreage	2,336	4/ 1,686	4/ 1,841	4/ 1,811	98.4
Production	86,783	4/64,444	4/73,519	4/71,285	97.0

1/ 1,000 acres. 2/ 1,000 bushels. 3/ Intentions to plant. 4/ Exclusive of Hokkaido.

Table 20.- Feed grains: Movement from principal exporting countries

Commodity and country	Exports for year						Exports as far as reported		
	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39	July 1 to	1938-39 1/	1939-40 1/
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels		1,000 bushels	1,000 bushels
BARLEY, EXPORTS: 2/									
United States	5,935	4,050	9,886	5,153	17,614	11,215	June 30	11,215	3,496
Canada	1,547	14,453	6,882	18,880	14,014	16,537	June 30	16,537	13,338
Argentina	24,047	20,604	9,276	15,265	10,241	9,356	June 8	9,267	14,699
Danube and U.S.S.R. ..	27,707	7,870	41,090	26,305	19,983	26,005	June 30	26,005	4,297
Total	59,236	46,977	67,134	65,603	61,852	63,113		63,024	35,830
OATS, EXPORTS: 2/									
United States	1,405	1,147	1,429	912	12,331	5,106	June 30	5,106	1,318
Canada	8,694	18,307	15,615	10,690	8,504	13,738	June 30	13,738	23,566
Argentina	20,935	43,721	10,072	25,034	28,505	19,379	June 30	19,379	28,670
Danube and U.S.S.R. ..	2,027	10	1,390	940	160	30	June 30	30	250
Total	33,061	63,185	28,506	37,576	49,500	38,253		38,253	53,804
CORN, EXPORTS: 3/							Oct. 1 to:		
United States	4,812	1,143	867	432	139,893	34,369	June 30	30,785	30,161
Danube and U.S.S.R. ..	19,506	17,082	14,321	25,835	9,790	19,629	July 13	19,192	5,304
Argentina	230,191	244,427	297,387	401,722	132,495	142,869	July 13	112,033	77,003
South Africa	3,684	23,875	10,239	24,781	23,949	25,991	July 13	11,490	643
Total	258,193	286,527	322,814	452,770	306,127	222,858		173,500	113,111
CORN, IMPORTS: 3/									
United States	883	36,955	21,096	103,670	1,819	442	May 31	267	399

Compiled from official and trade sources.

1/ Preliminary.
2/ Year beginning July 1.
3/ Year beginning October 1.

Revisions for data published in the "Feed Statistics" (FdS-7 Sup.)

Page	Table		Corn	Oats	Barley	Total
7	3	1939	2,619,137	937,215	276,298	94,962
		1940	2,415,998	1,031,622	287,377	91,051
9	5	1939	1,961,834	734,004	189,062	71,214
		1940	1,675,533	819,336	192,116	64,635
10	6	1939	947,526	265,639	34,655	31,613
		1940	766,349	298,961	31,634	27,000
11	7	1939	1,014,308	468,365	154,407	39,601
		1940	909,184	520,375	160,482	37,635

25	22	Feb.	13,259	Mar.	11,923	Apr.	11,958	May	12,515	June	24,062
26	23	Feb.	7,627	Mar.	6,029	Apr.	10,009	May	17,273	June	13,969
27	24	Feb.	4,840	Mar.	4,781	Apr.	4,257	May	2,966	June	1,873
28	25	Feb.	4,343	Mar.	4,450	Apr.	4,429	May	4,391	June	2,651
29	26	Feb.	5,645	Mar.	5,059	Apr.	5,910	May	5,997	June	3,847
30	27	Oct.	8,588	Nov.	6,925	Dec.	6,386	Jan.	7,248	Feb.	7,076
		Mar.	6,874	Apr.	7,042	May	7,607	June	6,390		
33	28	Feb.	57.6	Mar.	57.9	Apr.	62.5	May	68.6	June	65.8
35	29	Feb.	42.9	Mar.	43.0	Apr.	43.1	May	40.6	June	35.1
36	30	Feb.	54.1	Mar.	53.0	Apr.	55.7	May	54.7	June	46.3
40	34	Feb.	1.05	Mar.	1.10	Apr.	1.10	May	1.14	June	1.17
40	35	Feb.	.96	Mar.	1.01	Apr.	1.00	May	.96	June	.79
41	36	1937-38 av.	.83	-	1939-40 av. 2/ .80						
		Corn-Oats, Feb.	1.5	Mar.	1.5	Apr.	1.5	May	1.7	June	1.9
		Corn-Barley, Feb.	1.2	Mar.	1.2	Apr.	1.3	May	1.4	June	1.6
42	37	Feb.	8.9	Mar.	8.8	Apr.	8.7	May	8.1	June	7.6
43	38	Feb.	15.8	Mar.	16.1	Apr.	16.1	May	14.3	June	14.7
44	39	Feb.	28.3	Mar.	26.5	Apr.	25.0	May	24.0	June	23.7
45	40	Feb.	5.93	Mar.	7.84	Apr.	8.31	May	8.48	June	8.45
46	41	Nov.	393.4	Dec.	376.5	Jan.	400.2	Feb.	364.3	Mar.	427.6
		Apr.	357.9	May	399.4						
54	52	Feb.	8.10	Mar.	8.22	Apr.	8.29	May	8.32	June	7.71
		1937-38 av.	8.84		1938-39 av. 7.04				1939-40		7.89

75 66 1940: Chicago No. 3 Yellow Feb. 57.6 Mar. 57.9 Apr. 62.5
May 68.6 June 65.8
Buenos Aires La Plata Jan. 46.4 Feb. 38.9 Mar. 38.3
Apr. 34.5 May 32.0

76 67 1939-40: Beginning September converted according to official exchange
rate: Sept. 29.5 Oct. 25.9 Nov. 25.1 Dec. 30.6 Jan. 32.9
Feb. 32.2 Mar. 31.0 Apr. 31.5 May 28.4 June 25.9

77 68 1939-40: Beginning September converted according to official exchange
rate: Sept. 41.4 Oct. 38.7 Nov. 38.4 Dec. 43.7 Jan. 45.5
Feb. 47.4 Mar. 46.6 Apr. 46.2 May 36.5 June 26.5